

## SEQUENCE LISTING

<110> Sheppard, Paul O.  
Jelinek, Laura J.

<120> Mammalian Neuro-Growth Factor Like  
Protein

<130> 97-28C1

<150> 09/099,295

<151> 1998-06-18

<150> 60/050,143

<151> 1997-06-18

<160> 24

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1297

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (69)...(887)

<400> 1

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      Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val
          1             5             10
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ttg gca gtg ggc ggc aca gag cac gcc tac cgg ccc ggc cgt agg gtg 158
Leu Ala Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val
  15             20             25             30
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tgt gct gtc cgg gct cac ggg gat cct gtc tcc gag tcg ttc gtg cag	206
Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val Gln	
35 40 45	
cg t gtg tac cag ccc ttc ctc acc acc tgc gac ggg cac cgg gcc tgc	254
Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys	
50 55 60	
agc acc tac cga acc atc tat agg acc gcc tac cgc cgc agc cct ggg	302
Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly	
65 70 75	
ctg gcc cct gcc agg cct cgc tac gcg tgc tgc ccc ggc tgg aag agg	350
Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg	
80 85 90	
acc agc ggg ctt cct ggg gcc tgt gga gca gca ata tgc cag ccg cca	398
Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro	
95 100 105 110	
tgc cgg aac gga ggg agc tgt gtc cag cct ggc cgc tgc cgc tgc cct	446
Cys Arg Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro	
115 120 125	
gca gga tgg cgg ggt gac act tgc cag tca gat gtg gat gaa tgc agt	494
Ala Gly Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser	
130 135 140	
gct agg agg ggc ggc tgt ccc cag cgc tgc gtc aac acc gcc ggc agt	542
Ala Arg Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser	
145 150 155	
tac tgg tgc cag tgt tgg gag ggg cac agc ctg tct gca gac ggt aca	590
Tyr Trp Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr	
160 165 170	
ctc tgt gtg ccc aag gga ggg ccc ccc agg gtg gcc ccc aac ccg aca	638
Leu Cys Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr	
175 180 185 190	

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Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala  
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 Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val  
 35 40 45  
 Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr  
 50 55 60  
 Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala  
 65 70 75 80  
 Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser  
 85 90 95  
 Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg  
 100 105 110  
 Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly  
 115 120 125  
 Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg  
 130 135 140  
 Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp  
 145 150 155 160  
 Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys  
 165 170 175  
 Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val  
 180 185 190  
 Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp  
 195 200 205  
 Leu Leu Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu  
 210 215 220  
 Ala Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu  
 225 230 235 240  
 Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu Gln  
 245 250 255  
 Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys Lys Asp  
 260 265 270  
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<210> 3

<211> 254

<212> PRT

<213> Homo sapiens

<400> 3

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His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val Tyr Gln Pro  
 20 25 30  
 Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr  
 35 40 45  
 Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg  
 50 55 60  
 Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro  
 65 70 75 80  
 Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly  
 85 90 95  
 Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly  
 100 105 110  
 Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly  
 115 120 125  
 Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys  
 130 135 140  
 Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys  
 145 150 155 160  
 Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala  
 165 170 175  
 Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu Glu  
 180 185 190  
 Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala Ser Gln  
 195 200 205  
 Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu Val His Ser  
 210 215 220  
 Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu Gln Ile Ser Phe  
 225 230 235 240  
 Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys Lys Asp Ser  
 245 250

<210> 4

<211> 284

<212> DNA

<213> Homo sapiens

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 cagtgggcgg cacagagcac gcctaccggc ccggccgtag ggtgtgtgct gtccgggctc 180

acggggaccc tgtctccgag tcgttcgtgc agcgtgtgta ccagcccttc ctcaccacct 240  
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<210> 5  
<211> 40  
<212> DNA  
<213> Homo sapiens

<400> 5  
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<212> DNA  
<213> Homo sapiens

<400> 6  
gctgatgtgg cttctggt 18

<210> 7  
<211> 18  
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<213> Homo sapiens

<400> 7  
ggtaggcgtg ctctgtgc 18

<210> 8  
<211> 708  
<212> PRT  
<213> Homo sapiens

<400> 8  
Thr His Arg Gly Leu His Ile Ser Ala Leu Ala Thr Tyr Arg Ala Arg  
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Gly Pro Arg Gly Leu Tyr Ala Arg Gly Ala Arg Gly Val Ala Leu Cys  
20 25 30

Tyr Ser Ala Leu Ala Val Ala Leu Ala Arg Gly Ala Leu Ala His Ile  
 35 40 45  
 Ser Gly Leu Tyr Ala Ser Pro Pro Arg Val Ala Leu Ser Glu Arg Gly  
 50 55 60  
 Leu Ser Glu Arg Pro His Glu Val Ala Leu Gly Leu Asn Ala Arg Gly  
 65 70 75 80  
 Val Ala Leu Thr Tyr Arg Gly Leu Asn Pro Arg Pro His Glu Leu Glu  
 85 90 95  
 Thr His Arg Thr His Arg Cys Tyr Ser Ala Ser Pro Gly Leu Tyr His  
 100 105 110  
 Ile Ser Ala Arg Gly Ala Leu Ala Cys Tyr Ser Ser Glu Arg Thr His  
 115 120 125  
 Arg Thr Tyr Arg Ala Arg Gly Thr His Arg Ile Leu Glu Thr Tyr Arg  
 130 135 140  
 Ala Arg Gly Thr His Arg Ala Leu Ala Thr Tyr Arg Ala Arg Gly Ala  
 145 150 155 160  
 Arg Gly Ser Glu Arg Pro Arg Gly Leu Tyr Leu Glu Ala Leu Ala Pro  
 165 170 175  
 Arg Ala Leu Ala Ala Arg Gly Pro Arg Ala Arg Gly Thr Tyr Arg Ala  
 180 185 190  
 Leu Ala Cys Tyr Ser Cys Tyr Ser Pro Arg Gly Leu Tyr Thr Arg Pro  
 195 200 205  
 Leu Tyr Ser Ala Arg Gly Thr His Arg Ser Glu Arg Gly Leu Tyr Leu  
 210 215 220  
 Glu Pro Arg Gly Leu Tyr Ala Leu Ala Cys Tyr Ser Gly Leu Tyr Ala  
 225 230 235 240  
 Leu Ala Ala Leu Ala Ile Leu Glu Cys Tyr Ser Gly Leu Asn Pro Arg  
 245 250 255  
 Pro Arg Cys Tyr Ser Ala Arg Gly Ala Ser Asn Gly Leu Tyr Gly Leu  
 260 265 270  
 Tyr Ser Glu Arg Cys Tyr Ser Val Ala Leu Gly Leu Asn Pro Arg Gly  
 275 280 285  
 Leu Tyr Ala Arg Gly Cys Tyr Ser Ala Arg Gly Cys Tyr Ser Pro Arg  
 290 295 300  
 Ala Leu Ala Gly Leu Tyr Thr Arg Pro Ala Arg Gly Gly Leu Tyr Ala  
 305 310 315 320  
 Ser Pro Thr His Arg Cys Tyr Ser Gly Leu Asn Ser Glu Arg Ala Ser  
 325 330 335  
 Pro Val Ala Leu Ala Ser Pro Gly Leu Cys Tyr Ser Ser Glu Arg Ala  
 340 345 350

Leu Ala Ala Arg Gly Ala Arg Gly Gly Leu Tyr Gly Leu Tyr Cys Tyr  
 355 360 365  
 Ser Pro Arg Gly Leu Asn Ala Arg Gly Cys Tyr Ser Val Ala Leu Ala  
 370 375 380  
 Ser Asn Thr His Arg Ala Leu Ala Gly Leu Tyr Ser Glu Arg Thr Tyr  
 385 390 395 400  
 Arg Thr Arg Pro Cys Tyr Ser Gly Leu Asn Cys Tyr Ser Thr Arg Pro  
 405 410 415  
 Gly Leu Gly Leu Tyr His Ile Ser Ser Glu Arg Leu Glu Ser Glu Arg  
 420 425 430  
 Ala Leu Ala Ala Ser Pro Gly Leu Tyr Thr His Arg Leu Glu Cys Tyr  
 435 440 445  
 Ser Val Ala Leu Pro Arg Leu Tyr Ser Gly Leu Tyr Gly Leu Tyr Pro  
 450 455 460  
 Arg Pro Arg Ala Arg Gly Val Ala Leu Ala Leu Ala Pro Arg Ala Ser  
 465 470 475 480  
 Asn Pro Arg Thr His Arg Gly Leu Tyr Val Ala Leu Ala Ser Pro Ser  
 485 490 495  
 Glu Arg Ala Leu Ala Met Glu Thr Leu Tyr Ser Gly Leu Gly Leu Val  
 500 505 510  
 Ala Leu Gly Leu Asn Ala Arg Gly Leu Glu Gly Leu Asn Ser Glu Arg  
 515 520 525  
 Ala Arg Gly Val Ala Leu Ala Ser Pro Leu Glu Leu Glu Gly Leu Gly  
 530 535 540  
 Leu Leu Tyr Ser Leu Glu Gly Leu Asn Leu Glu Val Ala Leu Leu Glu  
 545 550 555 560  
 Ala Leu Ala Pro Arg Leu Glu His Ile Ser Ser Glu Arg Leu Glu Ala  
 565 570 575  
 Leu Ala Ser Glu Arg Gly Leu Asn Ala Leu Ala Leu Glu Gly Leu His  
 580 585 590  
 Ile Ser Gly Leu Tyr Leu Glu Pro Arg Ala Ser Pro Pro Arg Gly Leu  
 595 600 605  
 Tyr Ser Glu Arg Leu Glu Leu Glu Val Ala Leu His Ile Ser Ser Glu  
 610 615 620  
 Arg Pro His Glu Gly Leu Asn Gly Leu Asn Leu Glu Gly Leu Tyr Ala  
 625 630 635 640  
 Arg Gly Ile Leu Glu Ala Ser Pro Ser Glu Arg Leu Glu Ser Glu Arg  
 645 650 655  
 Gly Leu Gly Leu Asn Ile Leu Glu Ser Glu Arg Pro His Glu Leu Glu  
 660 665 670



<400> 11  
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Arg Gly Val Ala Leu Ala Leu Ala Pro Arg Ala Ser Asn Pro Arg Thr  
20 25 30

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<210> 12
<211> 331
<212> PRT
<213> Homo sapiens
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Gly Pro Arg Gly Leu Tyr Ala Arg Gly Ala Arg Gly Val Ala Leu Cys
          20          25          30
Tyr Ser Ala Leu Ala Val Ala Leu Ala Arg Gly Ala Leu Ala His Ile
          35          40          45

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Ser Gly Leu Tyr Ala Ser Pro Pro Arg Val Ala Leu Ser Glu Arg Gly  
 50 55 60  
 Leu Ser Glu Arg Pro His Glu Val Ala Leu Gly Leu Asn Ala Arg Gly  
 65 70 75 80  
 Val Ala Leu Thr Tyr Arg Gly Leu Asn Pro Arg Pro His Glu Leu Glu  
 85 90 95  
 Thr His Arg Thr His Arg Cys Tyr Ser Ala Ser Pro Gly Leu Tyr His  
 100 105 110  
 Ile Ser Ala Arg Gly Ala Leu Ala Cys Tyr Ser Ser Glu Arg Thr His  
 115 120 125  
 Arg Thr Tyr Arg Ala Arg Gly Thr His Arg Ile Leu Glu Thr Tyr Arg  
 130 135 140  
 Ala Arg Gly Thr His Arg Ala Leu Ala Thr Tyr Arg Ala Arg Gly Ala  
 145 150 155 160  
 Arg Gly Ser Glu Arg Pro Arg Gly Leu Tyr Leu Glu Ala Leu Ala Pro  
 165 170 175  
 Arg Ala Leu Ala Ala Arg Gly Pro Arg Ala Arg Gly Thr Tyr Arg Ala  
 180 185 190  
 Leu Ala Cys Tyr Ser Cys Tyr Ser Pro Arg Gly Leu Tyr Thr Arg Pro  
 195 200 205  
 Leu Tyr Ser Ala Arg Gly Thr His Arg Ser Glu Arg Gly Leu Tyr Leu  
 210 215 220  
 Glu Pro Arg Gly Leu Tyr Ala Leu Ala Cys Tyr Ser Gly Leu Tyr Ala  
 225 230 235 240  
 Leu Ala Ala Leu Ala Ile Leu Glu Cys Tyr Ser Gly Leu Asn Pro Arg  
 245 250 255  
 Pro Arg Cys Tyr Ser Ala Arg Gly Ala Ser Asn Gly Leu Tyr Gly Leu  
 260 265 270  
 Tyr Ser Glu Arg Cys Tyr Ser Val Ala Leu Gly Leu Asn Pro Arg Gly  
 275 280 285  
 Leu Tyr Ala Arg Gly Cys Tyr Ser Ala Arg Gly Cys Tyr Ser Pro Arg  
 290 295 300  
 Ala Leu Ala Gly Leu Tyr Thr Arg Pro Ala Arg Gly Gly Leu Tyr Ala  
 305 310 315 320  
 Ser Pro Thr His Arg Cys Tyr Ser Gly Leu Asn  
 325 330

<210> 13

<211> 158

<212> PRT

<213> Homo sapiens

&lt;400&gt; 13

Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala Val Arg Ala  
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 20 25 30  
 Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr  
 35 40 45  
 Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg  
 50 55 60  
 Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro  
 65 70 75 80  
 Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly  
 85 90 95  
 Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly  
 100 105 110  
 Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly  
 115 120 125  
 Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys  
 130 135 140  
 Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val  
 145 150 155

&lt;210&gt; 14

&lt;211&gt; 73

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 14

Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro  
 1 5 10 15  
 Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln Ser  
 20 25 30  
 Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln Arg Cys  
 35 40 45  
 Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu Gly His Ser  
 50 55 60  
 Leu Ser Ala Asp Gly Thr Leu Cys Val  
 65 70

&lt;210&gt; 15

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 15

Ala	Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro
1				5					10					15	
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln	Ser
			20					25					30		
Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln	Arg	Cys
		35					40					45			
Val	Asn	Thr	Ala	Gly	Ser	Tyr	Trp	Cys	Gln	Cys	Trp	Glu	Gly	His	Ser
	50					55					60				
Leu	Ser	Ala	Asp	Gly	Thr	Leu	Cys	Val	Pro	Lys	Gly	Gly	Pro	Pro	Arg
65					70					75					80
Val	Ala	Pro	Asn	Pro	Thr	Gly	Val	Asp	Ser	Ala	Met	Lys	Glu	Glu	Val
			85					90					95		
Gln	Arg	Leu	Gln	Ser	Arg	Val	Asp	Leu	Leu	Glu	Glu	Lys	Leu	Gln	Leu
		100						105					110		
Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala	Ser	Gln	Ala	Leu	Glu	His	Gly
	115						120					125			
Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu	Val	His	Ser	Phe	Gln	Gln	Leu	Gly
	130					135					140				
Arg	Ile	Asp	Ser	Leu	Ser	Glu	Gln	Ile	Ser	Phe	Leu	Glu	Glu	Gln	Leu
145				150						155					160
Gly	Ser	Cys	Ser	Cys	Lys	Lys	Asp	Ser							
				165											

&lt;210&gt; 16

&lt;211&gt; 181

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 16

Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val	Cys	Ala	Val	Arg	Ala
1				5				10						15	
His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val	Gln	Arg	Val	Tyr	Gln	Pro
			20					25					30		
Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	Ala	Cys	Ser	Thr	Tyr	Arg	Thr
		35				40					45				
Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg
	50					55					60				

Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro  
 65 70 75 80  
 Gly Ala Cys Gly Ala Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn  
 85 90 95  
 Pro Thr Gly Val Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln  
 100 105 110  
 Ser Arg Val Asp Leu Leu Glu Glu Lys Leu Gln Leu Val Leu Ala Pro  
 115 120 125  
 Leu His Ser Leu Ala Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro  
 130 135 140  
 Gly Ser Leu Leu Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser  
 145 150 155 160  
 Leu Ser Glu Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser  
 165 170 175  
 Cys Lys Lys Asp Ser  
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<210> 17

<211> 293

<212> PRT

<213> Homo sapiens

<400> 17

Met Gly Ser Arg Ala Glu Leu Cys Thr Leu Leu Gly Gly Phe Ser Phe  
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 Glu Ser Gln Gly Val Cys Ser Lys Gln Thr Leu Val Val Pro Leu His  
 35 40 45  
 Tyr Asn Glu Ser Tyr Ser Gln Pro Val Tyr Lys Pro Tyr Leu Thr Leu  
 50 55 60  
 Cys Ala Gly Arg Arg Ile Cys Ser Thr Tyr Arg Thr Met Tyr Arg Val  
 65 70 75 80  
 Met Trp Arg Glu Val Arg Arg Glu Val Gln Gln Thr His Ala Val Cys  
 85 90 95  
 Cys Gln Gly Trp Lys Lys Arg His Pro Gly Ala Leu Thr Cys Glu Ala  
 100 105 110  
 Ile Cys Ala Lys Pro Cys Leu Asn Gly Gly Val Cys Val Arg Pro Asp  
 115 120 125  
 Gln Cys Glu Cys Ala Pro Gly Trp Gly Gly Lys His Cys His Val Asp  
 130 135 140

Val Asp Glu Cys Arg Thr Ser Ile Thr Leu Cys Ser His His Cys Phe  
 145 150 155 160  
 Asn Thr Ala Gly Ser Phe Thr Cys Gly Cys Pro His Asp Leu Val Leu  
 165 170 175  
 Gly Val Asp Gly Arg Thr Cys Met Glu Gly Ser Pro Glu Pro Pro Thr  
 180 185 190  
 Ser Ala Ser Ile Leu Ser Val Ala Val Arg Glu Ala Glu Lys Asp Glu  
 195 200 205  
 Arg Ala Leu Lys Gln Glu Ile His Glu Leu Arg Gly Arg Leu Glu Arg  
 210 215 220  
 Leu Glu Gln Trp Ala Gly Gln Ala Gly Ala Trp Val Arg Ala Val Leu  
 225 230 235 240  
 Pro Val Pro Pro Glu Glu Leu Gln Pro Glu Gln Val Ala Glu Leu Trp  
 245 250 255  
 Gly Arg Gly Asp Arg Ile Glu Ser Leu Ser Asp Gln Val Leu Leu Leu  
 260 265 270  
 Glu Glu Arg Leu Gly Ala Cys Ser Cys Glu Asp Asn Ser Leu Gly Leu  
 275 280 285  
 Gly Val Asn His Arg  
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<210> 18

<211> 1339

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (261)...(1094)

<400> 18

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 ctgtccctgt gggaagcccc cggcagcagc aagacgctgg ctgttcacc tgcccacaag 180  
 aacagccacc accagtaccc aggggatgac aagcggccgg accacaggcc aaaaaagaa 240  
 gaaggctacc ccacttacag atg cag acc atg tgg ggc tcc gga gaa ctg ctt 293  
 Met Gln Thr Met Trp Gly Ser Gly Glu Leu Leu  
 1 5 10

gta gca tgg ttt cta gtg ttg gca gca gat ggt act act gag cat gtc	341
Val Ala Trp Phe Leu Val Leu Ala Ala Asp Gly Thr Thr Glu His Val	
15 20 25	
tac aga ccc agc cgt aga gtg tgt act gtg ggg att tcc gga ggt tcc	389
Tyr Arg Pro Ser Arg Arg Val Cys Thr Val Gly Ile Ser Gly Gly Ser	
30 35 40	
atc tcg gag acc ttt gtg cag cgt gta tac cag cct tac ctc acc act	437
Ile Ser Glu Thr Phe Val Gln Arg Val Tyr Gln Pro Tyr Leu Thr Thr	
45 50 55	
tgc gac gga cac aga gcc tgc agc acc tac cga acc atc tac cgg act	485
Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr	
60 65 70 75	
gcc tat cgc cgt agc cct ggg gtg act ccc gca agg cct cgc tat gct	533
Ala Tyr Arg Arg Ser Pro Gly Val Thr Pro Ala Arg Pro Arg Tyr Ala	
80 85 90	
tgc tgc cct ggt tgg aag agg acc agt ggg ctc cct ggg gct tgt gga	581
Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly	
95 100 105	
gca gca ata tgc cag cct cca tgt ggg aat gga ggg agt tgc atc cgc	629
Ala Ala Ile Cys Gln Pro Pro Cys Gly Asn Gly Gly Ser Cys Ile Arg	
110 115 120	
cca gga cac tgc cgc tgc cct gtg gga tgg cag gga gat act tgc cag	677
Pro Gly His Cys Arg Cys Pro Val Gly Trp Gln Gly Asp Thr Cys Gln	
125 130 135	
aca gat gtt gat gaa tgc agt aca gga gag gcc agt tgt ccc cag cgc	725
Thr Asp Val Asp Glu Cys Ser Thr Gly Glu Ala Ser Cys Pro Gln Arg	
140 145 150 155	
tgt gtc aat act gtg gga agt tac tgg tgc cag gga tgg gag gga caa	773
Cys Val Asn Thr Val Gly Ser Tyr Trp Cys Gln Gly Trp Glu Gly Gln	
160 165 170	



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agc cca tct gca gat ggg acg cgc tgc ctg tct aag gag ggg ccc tcc 821
Ser Pro Ser Ala Asp Gly Thr Arg Cys Leu Ser Lys Glu Gly Pro Ser
      175              180              185

ccg gtg gcc cca aac ccc aca gca gga gtg gac agc atg gcg aga gag 869
Pro Val Ala Pro Asn Pro Thr Ala Gly Val Asp Ser Met Ala Arg Glu
      190              195              200

gag gtg tac agg ctg cag gct cgg gtt gat gtg cta gaa cag aaa ctg 917
Glu Val Tyr Arg Leu Gln Ala Arg Val Asp Val Leu Glu Gln Lys Leu
      205              210              215

cag ttg gtg ctg gcc cca ctg cac agc ctg gcc tct cgg tcc aca gag 965
Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala Ser Arg Ser Thr Glu
      220              225              230              235

cat ggg cta caa gat cct ggc agc ctg ctg gcc cat tcc ttc cag cag 1013
His Gly Leu Gln Asp Pro Gly Ser Leu Leu Ala His Ser Phe Gln Gln
      240              245              250

ctg gac cga att gat tca ctg agt gag cag gtg tcc ttc ttg gag gaa 1061
Leu Asp Arg Ile Asp Ser Leu Ser Glu Gln Val Ser Phe Leu Glu Glu
      255              260              265

cat ctg ggg tcc tgc tcc tgc aaa aaa gat ctg tgataacctc tcaccacca 1114
His Leu Gly Ser Cys Ser Cys Lys Lys Asp Leu
      270              275

ggctggatag agcagtcatc cctagatccc ttgtagccag agttcaggcg ctgtctgggtg 1174
gtgcctatga gcagaaggcc ctgcctcatt gtccctcttt cttaggaggt tcctaggact 1234
tgggcatggg gagtggggtc ttgtgtgact cttcagtggg gctccctgtc taagtggtaa 1294
ggtggggatt gtctccatct ttgtcataat aaagctgaga cttga 1339

<210> 19
<211> 278
<212> PRT
<213> Mus musculus

<400> 19
Met Gln Thr Met Trp Gly Ser Gly Glu Leu Leu Val Ala Trp Phe Leu
  1              5              10              15

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Val Leu Ala Ala Asp Gly Thr Thr Glu His Val Tyr Arg Pro Ser Arg  
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 Arg Val Cys Thr Val Gly Ile Ser Gly Gly Ser Ile Ser Glu Thr Phe  
                   35                                  40                                  45  
 Val Gln Arg Val Tyr Gln Pro Tyr Leu Thr Thr Cys Asp Gly His Arg  
                   50                                  55                                  60  
 Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser  
 65                                  70                                  75                                  80  
 Pro Gly Val Thr Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp  
                                   85                                  90                                  95  
 Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln  
                                   100                                  105                                  110  
 Pro Pro Cys Gly Asn Gly Gly Ser Cys Ile Arg Pro Gly His Cys Arg  
                                   115                                  120                                  125  
 Cys Pro Val Gly Trp Gln Gly Asp Thr Cys Gln Thr Asp Val Asp Glu  
                                   130                                  135                                  140  
 Cys Ser Thr Gly Glu Ala Ser Cys Pro Gln Arg Cys Val Asn Thr Val  
 145                                  150                                  155                                  160  
 Gly Ser Tyr Trp Cys Gln Gly Trp Glu Gly Gln Ser Pro Ser Ala Asp  
                                   165                                  170                                  175  
 Gly Thr Arg Cys Leu Ser Lys Glu Gly Pro Ser Pro Val Ala Pro Asn  
                                   180                                  185                                  190  
 Pro Thr Ala Gly Val Asp Ser Met Ala Arg Glu Glu Val Tyr Arg Leu  
                                   195                                  200                                  205  
 Gln Ala Arg Val Asp Val Leu Glu Gln Lys Leu Gln Leu Val Leu Ala  
                                   210                                  215                                  220  
 Pro Leu His Ser Leu Ala Ser Arg Ser Thr Glu His Gly Leu Gln Asp  
 225                                  230                                  235                                  240  
 Pro Gly Ser Leu Leu Ala His Ser Phe Gln Gln Leu Asp Arg Ile Asp  
                                   245                                  250                                  255  
 Ser Leu Ser Glu Gln Val Ser Phe Leu Glu Glu His Leu Gly Ser Cys  
                                   260                                  265                                  270  
 Ser Cys Lys Lys Asp Leu  
                                   275

<210> 20

<211> 29

<212> PRT

<213> Mus musculus

&lt;400&gt; 20

Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg  
 1 5 10 15  
 Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg  
 20 25

&lt;210&gt; 21

&lt;211&gt; 32

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 21

Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys  
 1 5 10 15  
 Gln Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln  
 20 25 30

&lt;210&gt; 22

&lt;211&gt; 37

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 22

Cys Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly  
 1 5 10 15  
 Val Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val  
 20 25 30  
 Asp Leu Leu Glu Glu  
 35

&lt;210&gt; 23

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 23

Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu Gln Ile Ser Phe Leu  
 1 5 10 15  
 Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys Lys Asp Ser  
 20 25

<210> 24  
 <211> 255  
 <212> PRT  
 <213> Homo sapiens

<400> 24

Thr	Glu	His	Val	Tyr	Arg	Pro	Ser	Arg	Arg	Val	Cys	Thr	Val	Gly	Ile
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Ser	Gly	Gly	Ser	Ile	Ser	Glu	Thr	Phe	Val	Gln	Arg	Val	Tyr	Gln	Pro
			20					25					30		
Tyr	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	Ala	Cys	Ser	Thr	Tyr	Arg	Thr
		35					40					45			
Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	Ser	Pro	Gly	Val	Thr	Pro	Ala	Arg
	50					55				60					
Pro	Arg	Tyr	Ala	Cys	Cys	Pro	Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro
65				70				75						80	
Gly	Ala	Cys	Gly	Ala	Ala	Ile	Cys	Gln	Pro	Pro	Cys	Gly	Asn	Gly	Gly
				85				90					95		
Ser	Cys	Ile	Arg	Pro	Gly	His	Cys	Arg	Cys	Pro	Val	Gly	Trp	Gln	Gly
			100					105					110		
Asp	Thr	Cys	Gln	Thr	Asp	Val	Asp	Glu	Cys	Ser	Thr	Gly	Glu	Ala	Ser
		115					120					125			
Cys	Pro	Gln	Arg	Cys	Val	Asn	Thr	Val	Gly	Ser	Tyr	Trp	Cys	Gln	Gly
	130					135					140				
Trp	Glu	Gly	Gln	Ser	Pro	Ser	Ala	Asp	Gly	Thr	Arg	Cys	Leu	Ser	Lys
145				150				155						160	
Glu	Gly	Pro	Ser	Pro	Val	Ala	Pro	Asn	Pro	Thr	Ala	Gly	Val	Asp	Ser
				165				170						175	
Met	Ala	Arg	Glu	Glu	Val	Tyr	Arg	Leu	Gln	Ala	Arg	Val	Asp	Val	Leu
			180					185					190		
Glu	Gln	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala	Ser
	195						200					205			
Arg	Ser	Thr	Glu	His	Gly	Leu	Gln	Asp	Pro	Gly	Ser	Leu	Leu	Ala	His
	210					215					220				
Ser	Phe	Gln	Gln	Leu	Asp	Arg	Ile	Asp	Ser	Leu	Ser	Glu	Gln	Val	Ser
225				230						235				240	
Phe	Leu	Glu	Glu	His	Leu	Gly	Ser	Cys	Ser	Cys	Lys	Lys	Asp	Leu	
				245				250						255	